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PACIFIC TELESIS
Group-Washington

DOCKET FILE COPY ORIGINAL

March 1, 1995

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: *ET Docket No. 94-124, RM-8308, Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications*

On behalf of Pacific Telesis Enhanced Services, Pacific Bell Mobile Service and Telesis Technologies Laboratory, please find enclosed an original and six copies of their *"Reply Comments"* in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 2 and 15	)	ET Docket No. 94-124
of the Commission's Rules to Permit	)	RM-8308
Use of Radio Frequencies Above 40 GHz	)	
for New Radio Applications	)	
	)	

REPLY COMMENTS OF PACIFIC TELESIS ENHANCED SERVICES, PACIFIC BELL MOBILE SERVICES AND TELESIS TECHNOLOGIES LABORATORY

Pacific Telesis Enhanced Services, Pacific Bell Mobile Service and Telesis Technologies Laboratory ("Pacific") hereby reply to comments filed by various parties on the Notice of Proposed Rulemaking in the above-captioned proceeding regarding the releasing of 18 GHz of spectrum above 40 GHz for commercial development.[1]

I. THE COMMISSION SHOULD NOT RELOCATE LMDS FROM 27.5-29.5 GHZ TO 40.5-42.5 GHZ

We take strong exception to the comments of the satellite interests who have taken the opportunity presented by this docket to advocate the relocation of LMDS from 27.5-29.5 GHz to 40.5-42.5 GHz.[2] In our original comments, we endorsed the commission's efforts to make spectrum above 40 GHz available for the development

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[1] In the Matter of Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, ET Docket No. 94-124, Notice of Proposed Rulemaking, released November 8, 1994 ("NPRM").

[2] See comments of GE American Communiations, Inc., Hughes Communications Galaxy, Inc., National Aeronautics and Space Administration, Rockwell International Corp., and TRW Inc.

of advanced services and we continue to endorse this approach. Our original comments were in no way intended to endorse the approach that LMDS applications be moved from the 28 GHz band to newly allocated spectrum at 40 GHz, but rather to encourage the Commission to make additional spectrum available for the introduction and development of new services.

LMDS has strong, near-term potential to offer services to the benefit of the public. In order to assure that the public will see those benefits in the near term, LMDS should not be moved to 40+ GHz for the reasons set forth below.

First, we are optimistic that potential interference issues at 28 GHz between LMDS systems and Fixed Satellite Services (FSS) can be resolved to permit shared use of the spectrum. If interference issues cannot be completely resolved, we would advocate a splitting of the band from 27.5-29.5 GHz, with equal shares allocated to satellite and LMDS. Allocating this spectrum entirely to satellite interests will result in much of it laying fallow for several years while the satellite interests engineer their systems and devise business plans to justify the enormous investment required for deployment. This delay is contrary to the Commission's desire to use spectrum efficiently, to realize the market value of such spectrum, and to issue licenses such that the public interest is best served.

Second, LMDS represents near-term competition to existing video-delivery systems such as cable television, the ultimate benefits of which will accrue to consumers. In order for LMDS to be viable, equipment must be available for system operators and end-users. We are aware of many of the significant development efforts that have taken place over the last 18-24 months at 28 GHz. These efforts have resulted in the near-term availability of equipment necessary for deploying LMDS systems. We do not believe that equipment development at 40 GHz is as far along as the development effort at 28 GHz. Moving LMDS to 40+ GHz would effectively make much of 28 GHz development work obsolete, and would move the

deployment window for LMDS systems further out. Therefore, we believe relocation of LMDS will cause further delays in the development and introduction of competitive alternatives to cable television.

Third, moving LMDS to 40 GHz will result in smaller areas of coverage per transmitter and increased costs for the users of these systems, to the point that LMDS economic viability may be impaired in the near-term. We agree with the comments that 40 GHz offers many of the same physical characteristics as 28 GHz such as reflection, however rain attenuation at 40 GHz is more pronounced and will decrease the coverage of LMDS transmitters proportionately. Currently, equipment and electronics are not sufficiently developed in the 40+ GHz range. The "flexibility" in overcoming this attenuation as suggested by one commenter amounts to either increased cost or decreased coverage. Again, the unintended effect of this may be that potential users of LMDS may find it more difficult to justify their investments, thus precluding them from participating meaningfully in auctions and other licensing procedures.

Finally, we respectfully suggest that the majority of entities commenting favorably on the suitability of LMDS at 40 GHz are not those entities actually planning to deploy LMDS systems at these frequencies. While we agree that the spectrum from 40.5-42.5 GHz can eventually be used for Licensed Millimeter Wave Service (LMWS), we believe that both the public good and the economic value of spectrum will be maximized in the near-term by allowing LMDS to proceed on its current course at 27.5-29.5 GHz and by allocating additional spectrum for new development at 40.5-42.5 GHz.

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II. POWER LEVELS

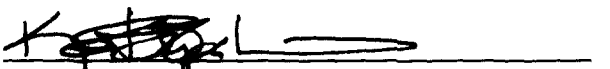
AT&T[3], Hughes Aircraft Company[4] and the Telecommunications Industry Association ("TIA")[5] propose a higher power limit than the level of 16 dBW EIRP roposed by the Commission. We strongly support a higher power limit of at least 36 dBW. This higher limit is needed to ensure a high quality and reliability in the radio links.

III. CONCLUSION

In conclusion, we support the Commission's proposal to open the millimeter wave frequency bands above 40 GHz for commercial development. The availability of this additional spectrum will stimulate the development of innovative technologies and benefit the public through the creation of new jobs and services. We believe that the Commission should not relocate LMDS from 27.5-29.5 GHz to 40.5-42.5 GHz since doing so would retard the deployment of LMDS services by delaying the availability of equipment and increasing the cost of deployment. However, we support making additional spectrum available for LMDS uses in the 40.5-42.5 GHz spectrum. Finally, we agree with other commenters that a higher power limit would make the deployment of new services at 40.5-42.5 GHz more economically feasible.

Respectfully Submitted,

PACIFIC TELESIS ENHANCED SERVICES,
PACIFIC BELL MOBILE SERVICES
TELESIS TECHNOLOGIES LABORATORY



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[3] AT&T, p. 4.

[4] Hughes Aircraft Company, pp. 9-10.

[5] TIA, p. 6.

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